

August 1, 2012

RECEIVED

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SUPERFUND DIVISION

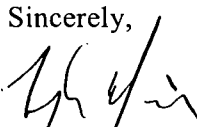
Mr. Jason Gunter
Remedial Project Manager
U.S. Environmental Protection Agency
Region 7 - Superfund Branch
901 North 5th Street
Kansas City, KS 66101

Re: National Mine Tailings Site Progress Report

Dear Mr. Gunter:

As required by Article VI, Section 51 of the Unilateral Administrative Order (Docket No. CERCLA-07-2006-0231) for the referenced project and on behalf of The Doe Run Company and NL Industries, Inc., the progress report for the period June 1, 2012 through June 30, 2012 is enclosed. If you have any questions or comments, please call me at 573-638-5020 or Mark Nations at 573-518-0600.

Sincerely,


Ty L. Morris, P.E., R.G.
Vice President

TLM/jms

Enclosure

c: Mark Nations – TDRC
Matt Wohl – TDRC (electronic only)
Kevin Lombardozzi – NL Industries, Inc.
John Kennedy – City of Park Hills
Norm Lucas – Park Hills – Leadington Chamber of Commerce
Kathy Rangen – MDNR
Tim Skoglund – Barr Engineering

07WH

40391923

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Superfund

0400

National Mine Tailings Site
Park Hills, Missouri
Removal Action - Monthly Progress Report
Period: June 1, 2012 – June 30, 2012

1. Actions Performed and Problems Encountered This Period:

- a. Work at the site continued on the task of modifying the southern slope of the stormwater detention basin in the West Area. This work focused on the task of installing the extension to the storm sewer outlet, finishing construction of the berm, and rocking the portions of the berm that had been verified to have been constructed to the final subgrade elevations. As of the end of the period, work on this task had been completed.
- b. Work at the site also continued on the task of placing rock on the Thin Tailings Area and filling in the buttresses down to the Thin Tailings Area. This included grading the area to design elevations and making sure all areas drained. This also included placing a 6-inch layer of crushed rock filter on the graded surface and a 12-inch layer of slope riprap on top of the crushed rock filter. As of the end of the period, approximately 75% of this task had been completed.
- c. Work at the site also continued on finishing the construction of the walk trail through the north section of the Thin Tailings Area. As of the end of the period, work on this task had been completed.
- d. Work at the site continued on the task of meeting with the landowners who may be affected by the removal action activities. This included meeting with landowners who signed an access agreement prior to April 1, 2008, which needed to be amended, as well as landowners who have not signed agreements. As of the end of the period, the following had been accomplished:

Landowners that own property within the site boundary

Total number of landowners = 22

Landowners who signed an access agreement prior to 04/01/08 = 18

Landowners who signed an access agreement after 04/01/08 = 1

Landowners who are reviewing the access agreement = 3

Landowners who have refused to sign the access agreement = 0

Landowners who still need to be met with concerning the access agreement = 0

Total number of landowners who need to sign the amendment letter = 18

Landowners who have signed the amendment letter = 16

Landowners who are reviewing the amendment letter = 1

Landowners who refused to sign the amendment letter = 0

Landowners who still need to be met with concerning the amendment letter = 1

(Changes in the total number of landowners and the total number of landowners who need to sign the amendment letter are as a result of sales that occurred since the meetings with the landowners began.)

Landowners that own property immediately adjacent to the site boundary

Total number of landowners = 27

Landowners who signed an access agreement prior to 04/01/08 = 11

Landowners who signed an access agreement after 04/01/08 = 6

Landowners who are reviewing the access agreement = 4

Landowners who have refused to sign the access agreement = 3

Landowners who still need to be met with concerning the access agreement = 3

Total number of landowners who need to sign the amendment letter = 11

Landowners who have signed the amendment letter = 11

Landowners who are reviewing the amendment letter = 0

Landowners who refused to sign the amendment letter = 0

Landowners who still need to be met with concerning the amendment letter = 0

(It is not anticipated that it will be a challenge to work around the property owned by the three landowners that refused to sign the access agreement based on location of the property in relationship to the work that needs to be completed. Changes in the total number of landowners and the total number of landowners who need to sign the amendment letter are as a result of sales that occurred since the meetings with the landowners began.)

2. Analytical Data and Results Received This Period:

- a. During this period, water samples were collected at the sampling locations identified in Appendix C of the Removal Action Work Plan where water was present. Copies of the analytical results from the last sampling event are included with this progress report.
- a. During this period, the Ambient Air Monitoring Reports for March 2012, First Quarter 2012, and April 2012 were received. Any issues identified in these reports are discussed below. Copies of these documents have been sent to your attention.

The March 2012 Ambient Air Monitoring Report noted the following:

- The action levels for lead and dust were not exceeded.
- No samples were taken from the TSP monitors on 03/07/12 because the crew was in training.
- There was a QA blank filter associated with the Big River #4 TSP and PM₁₀ monitors on 03/28/12.

The First Quarter 2012 Ambient Air Monitoring Report noted the following:

- The action levels for lead and dust were not exceeded.
- No samples were taken with the TSP monitors on 1/2/12 due to the holiday.
- There was a QA blank filter associated with the Rivermines #3 (Water Treatment Plant) TSP monitors and PM₁₀ on 02/29/12.
- No samples were taken from the TSP monitors on 03/07/12 because the crew was in training.
- There was a QA blank filter associated with the Big River #4 TSP and PM₁₀ monitors on 03/28/12.

The April 2012 Ambient Air Monitoring Report noted the following:

- The action levels for lead and dust were not exceeded.
- No samples were taken with the Big River #4 PM₁₀ monitor on 04/21/12 due to mechanical failure. Upon discovery, the issue was corrected.
- No samples were taken with the National #2 (Soccer Field) TSP monitor on 04/24/12 due to mechanical failure. Upon discovery, the issue was corrected.
- There was a QA blank filter associated with the National #1 (Ozark Insulation) TSP monitors and PM₁₀ on 04/30/12.

3. Developments Anticipated and Work Scheduled for Next Period:

- a. Continue rocking the portion of the Thin Tailings Area between the haul road and the sewer line from Northing Coordinate N736750 to Northing Coordinate N739000.
- b. Finish rocking the buttressing slope of the Industrial Park Area for the portion of the slope immediately east of the Doe Run shop.
- c. Finish constructing the eastern buttressing slope between Northing Coordinates N737900 and N738400.
- d. Finish rocking the top of the East Erosion Area.
- e. Finish rocking the West Area.
- f. Complete monthly water sampling activities as described in the Removal Action Work Plan.
- g. Complete air monitoring activities as described in the Removal Action Work Plan.
- h. Continue efforts to contact and meet with the landowners identified as potentially being affected by the removal action activities so that access agreements can be obtained.

4. Changes in Personnel:

- a. None.

5. Issues or Problems Arising This Period:

- a. None.

6. Resolution of Issues or Problems Arising This Period:

- a. None.

End of Monthly Progress Report

July 05, 2012

Allison Olds
Barr Engineering Company
1001 Diamond Ridge
Suite 1100
Jefferson City, MO 65109
TEL: (573) 638-5007
FAX: (573) 638-5001



RE: National MTS-25/86-0003

WorkOrder: 12061226

Dear Allison Olds:

TEKLAB, INC received 1 sample on 6/28/2012 10:20:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,



Michael L. Austin
Project Manager
(618)344-1004 ex 16
MAustin@teklabinc.com

Client: Barr Engineering Company

Work Order: 12061226

Client Project: National MTS-25/86-0003

Report Date: 05-Jul-12

This reporting package includes the following:

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Chain of Custody	Appended

Client: Barr Engineering Company

Work Order: 12061226

Client Project: National MTS-25/86-0003

Report Date: 05-Jul-12

Abbr Definition

- CCV** Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
- DF** Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilutions factors.
- DNI** Did not ignite
- DUP** Laboratory duplicate is an aliquot of a sample taken from the same container under laboratory conditions for independent processing and analysis independently of the original aliquot.
- ICV** Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
- IDPH** IL Dept. of Public Health
- LCS** Laboratory control sample, spiked with verified known amounts of analytes, is analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system. The acceptable recovery range is in the QC Package (provided upon request).
- LCS D** Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MB** Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
- MDL** Method detection limit means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.
- MS** Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
- MSD** Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MW** Molecular weight
- ND** Not Detected at the Reporting Limit
- NELAP** NELAP Accredited
- PQL** Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions. The acceptable recovery range is listed in the QC Package (provided upon request).
- RL** The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
- RPD** Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
- SPK** The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
- Surr** Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
- TNTC** Too numerous to count (> 200 CFU)

Qualifiers

- | | |
|--|---|
| # - Unknown hydrocarbon | B - Analyte detected in associated Method Blank |
| E - Value above quantitation range | H - Holding times exceeded |
| M - Manual Integration used to determine area response | ND - Not Detected at the Reporting Limit |
| R - RPD outside accepted recovery limits | S - Spike Recovery outside recovery limits |
| X - Value exceeds Maximum Contaminant Level | |

Client: Barr Engineering Company

Work Order: 12061226

Client Project: National MTS-25/86-0003

Report Date: 05-Jul-12

Cooler Receipt Temp: 1.8 °C

Locations and Accreditations

Collinsville		Springfield		Kansas City	
Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425	Address	3920 Pintail Dr Springfield, IL 62711-9415	Address	8421 Nieman Road Lenexa, KS 66214
Phone	(618) 344-1004	Phone	(217) 698-1004	Phone	(913) 541-1998
Fax	(618) 344-1005	Fax	(217) 698-1005	Fax	(913) 541-1998
Email	jhriley@teklabinc.com	Email	kmccclain@teklabinc.com	Email	dthompson@teklabinc.com

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2013	Collinsville
Kansas	KDHE	E-10374	NELAP	1/31/2013	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2013	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2012	Springfield
Arkansas	ADEQ	88-0966		3/14/2013	Collinsville
Illinois	IDPH	17584		4/30/2013	Collinsville
Kentucky	UST	0073		5/26/2013	Collinsville
Missouri	MDNR	00930		4/13/2013	Collinsville
Oklahoma	ODEQ	9978		8/31/2012	Collinsville

Client: Barr Engineering Company

Work Order: 12061226

Client Project: National MTS-25/86-0003

Report Date: 05-Jul-12

Lab ID: 12061226-001

Client Sample ID: Nat-East

Matrix: AQUEOUS

Collection Date: 06/27/2012 8:35

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 600 375.2 REV 2.0 1993 (TOTAL)								
Sulfate	NELAP	100		204	mg/L	10	06/28/2012 21:50	R165309
STANDARD METHOD 4500-H B, LABORATORY ANALYZED								
Lab pH		1.00		7.99		1	06/29/2012 8:03	R165295
STANDARD METHODS 2340 C								
Hardness, as (CaCO ₃)		5		540	mg/L	1	06/28/2012 13:20	R165292
STANDARD METHODS 2540 C (TOTAL)								
Total Dissolved Solids		20		612	mg/L	1	06/29/2012 13:57	R165379
STANDARD METHODS 2540 D								
Total Suspended Solids		6	R	< 6	mg/L	1	06/29/2012 12:40	R165324
% RPD was outside the QC limits due to low level results.								
STANDARD METHODS 2540 F								
Solids, Settleable		0.1		< 0.1	ml/L	1	06/28/2012 13:06	R165271
STANDARD METHODS 5310 C, ORGANIC CARBON								
Total Organic Carbon (TOC)		1.0		1.2	mg/L	1	06/29/2012 18:44	R165372
EPA 600 4.1.1, 200.7R4.4, METALS BY ICP (DISSOLVED)								
Cadmium	NELAP	2.00		< 2.00	µg/L	1	06/30/2012 3:51	79354
Zinc	NELAP	10.0		34.6	µg/L	1	06/30/2012 3:51	79354
EPA 600 4.1.4, 200.7R4.4, METALS BY ICP (TOTAL)								
Cadmium	NELAP	2.00		< 2.00	µg/L	1	07/03/2012 0:52	79356
Zinc	NELAP	10.0		37.1	µg/L	1	07/03/2012 0:52	79356
STANDARD METHODS 3030 E, 3113 B, METALS BY GFAA								
Lead		4.00	X	18.1	µg/L	2	07/02/2012 13:17	79353
STANDARD METHODS 3030 B, 3113 B, METALS BY GFAA (DISSOLVED)								
Lead		2.00	X	15.6	µg/L	1	06/29/2012 13:35	79351



Sample Summary

<http://www.teklabinc.com/>

Client: Barr Engineering Company

Work Order: 12061226

Client Project: National MTS-25/86-0003

Report Date: 05-Jul-12

Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
12061226-001	Nat-East	Aqueous	5	06/27/2012 8:35



Dates Report

<http://www.teklabinco.com/>

Client: Barr Engineering Company

Work Order: 12061226

Client Project: National MTS-25/86-0003

Report Date: 05-Jul-12

Sample ID	Client Sample ID Test Name	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
12061226-001A	Nat-East Standard Methods 2540 F	06/27/2012 8:35	06/28/2012 10:20		06/28/2012 13:06
12061226-001B	Nat-East EPA 600 375.2 Rev 2.0 1993 (Total) Standard Method 4500-H B, Laboratory Analyzed Standard Methods 2340 C Standard Methods 2540 C (Total) Standard Methods 2540 D	06/27/2012 8:35	06/28/2012 10:20		06/28/2012 21:50 06/29/2012 8:03 06/28/2012 13:20 06/29/2012 13:57 06/29/2012 12:40
12061226-001C	Nat-East EPA 600 4.1.4, 200.7R4.4, Metals by ICP (Total) Standard Methods 3030 E, 3113 B, Metals by GFAA	06/27/2012 8:35	06/28/2012 10:20	06/28/2012 15:45 06/28/2012 14:54	07/03/2012 0:52 07/02/2012 13:17
12061226-001D	Nat-East EPA 600 4.1.1, 200.7R4.4, Metals by ICP (Dissolved) Standard Methods 3030 B, 3113 B, Metals by GFAA (Dissolved)	06/27/2012 8:35	06/28/2012 10:20	06/28/2012 15:02 06/28/2012 14:05	06/30/2012 3:51 06/29/2012 13:35
12061226-001E	Nat-East Standard Methods 5310 C, Organic Carbon	06/27/2012 8:35	06/28/2012 10:20		06/29/2012 18:44

Quality Control Results

<http://www.teklabinc.com/>

Client: Barr Engineering Company
 Client Project: National MTS-25/86-0003

Work Order: 12061226
 Report Date: 05-Jul-12

EPA 600 375.2 REV 2.0 1993 (TOTAL)

Batch R165309		SampType: MBLK		Units mg/L						
SampID: MBLK										
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		< 10						06/28/2012

Batch R165309		SampType: LCS		Units mg/L						
SampID: LCS										
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		19	20	0	97.4	90	110	06/28/2012

Batch R165309		SampType: MS		Units mg/L						
SampID: 12061226-001BMS										
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		100		294	100	203.6	90.7	90	110	06/28/2012

Batch R165309		SampType: MSD		Units mg/L				RPD Limit 10		
SampID: 12061226-001BMSD										
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		100		300	100	203.6	96.8	294.2	2.07	06/28/2012

STANDARD METHOD 4500-H B, LABORATORY ANALYZED

Batch R165295		SampType: LCS		Units						
SampID: LCS										Date
Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Analyzed	
Lab pH	1.00		6.99	7.00	0	99.9	99.1	100.8	06/29/2012	

Batch R165295		SampType: DUP		Units				RPD Limit 10			
SampID: 12061226-001BDUP										Date Analyzed	
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
Lab pH		1.00		7.99				7.990	0.00	06/29/2012	

STANDARD METHODS 2340 C

Batch R165292		SampType: MBLK		Units mg/L						
SampID: MB-R165292										
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Hardness, as (CaCO3)		5		< 5						06/28/2012

Batch R165292		SampType: LCS		Units mg/L						
SampID: LCS-R165292										
Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Hardness, as (CaCO3)	5		1000	1000	0	100.0	90	110	06/28/2012	

Client: Barr Engineering Company
 Client Project: National MTS-25/86-0003

Work Order: 12061226
 Report Date: 05-Jul-12

STANDARD METHODS 2340 C

Batch R165292		SampType: MS		Units mg/L						
SampID: 12061226-001BMS										Date
Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Analyzed	
Hardness, as (CaCO3)	5		940	400	540.0	100.0	85	115	06/28/2012	

Batch R165292		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 12061226-001BMSD										Date Analyzed	
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
Hardness, as (CaCO3)		5		940	400	540.0	100.0	940.0	0.00	06/28/2012	

STANDARD METHODS 2540 C (TOTAL)

Batch R165379		SampType: MBLK		Units mg/L						
SampID: MBLK										
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids		20		< 20						06/29/2012
Total Dissolved Solids		20		< 20						06/29/2012

Batch R165379		SampType: LCS		Units mg/L							
SampID: LCS											Date Analyzed
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Total Dissolved Solids		20		1000	1000	0	100.0	90	110	06/29/2012	

Batch R165379		SampType: LCSQC		Units mg/L						
SampID: LCSQC										Date Analyzed
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Total Dissolved Solids		20		1020	1000	0	101.6	90	110	06/29/2012

Batch R165379		SampType: DUP		Units mg/L				RPD Limit 15			
SampID: 12061226-001B DUP										Date Analyzed	
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
Total Dissolved Solids		20		646				612.0	5.41	06/29/2012	

STANDARD METHODS 2540 D

Batch R165324		SampType: MBLK		Units mg/L							
SampID: MBLK											Date Analyzed
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Total Suspended Solids		6.00		< 6.00						06/29/2012	
Total Suspended Solids		6		< 6						06/29/2012	

Client: Barr Engineering Company

Work Order: 12061226

Client Project: National MTS-25/86-0003

Report Date: 05-Jul-12

STANDARD METHODS 2540 D

Batch R165324		SampType: LCS		Units mg/L						
SampID: LCS										Date
Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Analyzed	
Total Suspended Solids	6		107	100	0	107.0	85	115	06/29/2012	
Total Suspended Solids	6		97	100	0	97.0	85	115	06/29/2012	
Total Suspended Solids	6		106	100	0	106.0	85	115	06/29/2012	
Total Suspended Solids	6		102	100	0	102.0	85	115	06/29/2012	

Batch R165324		SampType: DUP		Units mg/L				RPD Limit 15			
SampID: 12061226-001b DUP										Date	
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Analyzed	
Total Suspended Solids		6	R	9				0	200.00	06/29/2012	

STANDARD METHODS 5310 C, ORGANIC CARBON

Batch R165372		SampType: MBLK		Units mg/L						
SampID: MBLK										
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)		1.0		< 1.0						06/29/2012

Batch R165372		SampType: LCS		Units mg/L						
SampID: LCS										Date
Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Analyzed	
Total Organic Carbon (TOC)	5.0		52.0	48.2	0	107.8	90	110	06/29/2012	

Batch R165372		SampType: MS		Units mg/L					
SampID: 12061226-001EMS									
Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)	1.0		5.7	5.0	1.190	90.6	85	115	06/29/2012

Batch R165372		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 12061226-001EMSD										Date	
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Analyzed	
Total Organic Carbon (TOC)		1.0		5.5	5.0	1.190	86.8	5.720	3.38	06/29/2012	

EPA 600 4.1.1, 200.7R4.4, METALS BY ICP (DISSOLVED)

Batch 79354		SampType: MBLK		Units µg/L						
SampID: MB-79354										Date
Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Analyzed	
Cadmium	2.00		< 2.00	2.00	0	0	-100	100	06/29/2012	
Zinc	10.0		< 10.0	10.0	0	0	-100	100	06/29/2012	

Client: Barr Engineering Company

Work Order: 12061226

Client Project: National MTS-25/86-0003

Report Date: 05-Jul-12

EPA 600 4.1.1, 200.7R4.4, METALS BY ICP (DISSOLVED)
Batch 79354 **SampType: LCS** Units µg/L

SampleID: LCS-79354

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cadmium	2.00		44.6	50.0	0	89.2	85	115	06/29/2012
Zinc	10.0		486	500	0	97.1	85	115	06/29/2012

Batch 79354 **SampType: MS** Units µg/L

SampleID: 12061226-001DMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cadmium	2.00		43.8	50.0	0	87.6	75	125	06/30/2012
Zinc	10.0		507	500	34.6	94.4	75	125	06/30/2012

Batch 79354 **SampType: MSD** Units µg/L

SampleID: 12061226-001DMSD

RPD Limit 20

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Cadmium	2.00		44.5	50.0	0	89.0	43.8	1.59	06/30/2012
Zinc	10.0		514	500	34.6	95.9	506.5	1.47	06/30/2012

EPA 600 4.1.4, 200.7R4.4, METALS BY ICP (TOTAL)
Batch 79356 **SampType: MBLK** Units µg/L

SampleID: MB-79356

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cadmium	2.00		< 2.00	2.00	0	0	-100	100	06/29/2012
Zinc	10.0		< 10.0	10.0	0	0	-100	100	06/29/2012

Batch 79356 **SampType: LCS** Units µg/L

SampleID: LCS-79356

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cadmium	2.00		50.3	50.0	0	100.6	85	115	06/29/2012
Zinc	10.0		516	500	0	103.3	85	115	06/29/2012

Batch 79356 **SampType: MS** Units µg/L

SampleID: 12061226-001CMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cadmium	2.00		50.2	50.0	0	100.4	75	125	07/03/2012
Zinc	10.0		559	500	37.1	104.3	75	125	07/03/2012

Batch 79356 **SampType: MSD** Units µg/L

SampleID: 12061226-001CMSD

RPD Limit 20

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Cadmium	2.00		50.7	50.0	0	101.4	50.2	0.99	07/03/2012
Zinc	10.0		564	500	37.1	105.5	558.7	1.03	07/03/2012

Client: Barr Engineering Company

Work Order: 12061226

Client Project: National MTS-25/86-0003

Report Date: 05-Jul-12

STANDARD METHODS 3030 E, 3113 B, METALS BY GFAA

Batch 79353		SampType: MBLK		Units µg/L							Date Analyzed
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Lead		2.00		< 2.00	2.00	0	0	-100	100	06/29/2012	

Batch 79353		SampType: LCS		Units µg/L							Date Analyzed
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Lead		2.00		15.8	15.0	0	105.5	85	115	06/29/2012	

Batch 79353		SampType: MS		Units µg/L							Date Analyzed
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Lead		4.00		32.7	15.0	18.0734	97.4	70	130	07/02/2012	

Batch 79353		SampType: MSD		Units µg/L							Date Analyzed
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
Lead		4.00		31.7	15.0	18.0734	91.1	32.6766	2.92	07/02/2012	

STANDARD METHODS 3030 B, 3113 B, METALS BY GFAA (DISSOLVED)

Batch 79351		SampType: MBLK		Units µg/L							Date Analyzed
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Lead		2.00		< 2.00	2.00	0	0	-100	100	06/29/2012	

Batch 79351		SampType: LCS		Units µg/L							Date Analyzed
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Lead		2.00		14.3	15.0	0	95.3	85	115	06/29/2012	

Batch 79351		SampType: MS		Units µg/L							Date Analyzed
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Lead		2.00		30.2	15.0	15.5559	97.8	70	130	06/29/2012	

Batch 79351		SampType: MSD		Units µg/L							Date Analyzed
Analyses		RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
Lead		2.00		30.6	15.0	15.5559	100.6	30.2245	1.38	06/29/2012	



Receiving Check List

<http://www.teklabinc.com/>

Client: Barr Engineering Company

Work Order: 12061226

Client Project: National MTS-25/86-0003

Report Date: 05-Jul-12

Carrier: Ron Korte

Received By: SRH

Completed by:

On:

28-Jun-12

Timothy W. Mathis

Reviewed by:

On:

28-Jun-12

Elizabeth A. Hurley

Pages to follow: Chain of custody

1

Extra pages included

0

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Temp °C 1.8

Type of thermal preservation?

None ☐

Ice ☒

Blue Ice ☐

Dry Ice ☐

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Reported field parameters measured:

Field ☐

Lab ☒

NA ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

Water – at least one vial per sample has zero headspace?

Yes ☐

No ☐

No VOA vials ☒

Water - TOX containers have zero headspace?

Yes ☐

No ☐

No TOX containers ☒

Water - pH acceptable upon receipt?

Yes ☒

No ☐

NPDES/CWA TCN interferences checked/treated in the field?

Yes ☐

No ☐

NA ☒

Any No responses must be detailed below or on the COC.

Custody seal(s) intact on shipping container/cooler.



Teklab Chain of Custody

Pg. 1 of 1

Workorder 12061226

5445 Horseshoe Lake Road ~ Collinsville, IL 62234 ~ Phone: (618)344-1004 ~ Fax:(618)344-1005

Barr Engineering Co.		
1001 Diamond Ridge, Suite 1100		
Jefferson City	MO	65109
National MTS - 25/86-0003		

Are the samples chilled? ☒ Yes ☐ No with: ☒ Ice ☐ Blue ice

Preserved in ☒ Lab ☐ Field

Cooler Temp 1-8 Sampler Chris Schulte

Comments

Invoice to Mark Nations. Results to Allison Olds and Mark Nations, mnations@doerun.com
Matrix is surface water.
Metals = Cd, Pb, Zn

Custody, seal intact when counter picked up

Contact Allison Olds

eMail aolds@barr.com

Phone 573-638-5007

Requested Due Date Standard

Billing/PO Per contract with Doe Run

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	pH	T.S.S.	Total Dissolved Solids	Sulfate	Settleable Solids	T.O.C.	Total Metals	Dissolved Metals	Hardness			
12061226-001	Nat-East	6/27/12/8:35	Unpres	S	Aqueous	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			Unpres		Aqueous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			Unpres		Aqueous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			Unpres		Aqueous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			Unpres		Aqueous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			Unpres		Aqueous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			Unpres		Aqueous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			Unpres		Aqueous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12061226-001
CORRECT PICK UP

Relinquished By *	Date/Time	Received By	Date/Time
Chris Schulte / Barr	6/27/12/12:30	Stephane Haynes	6/28/12/845
	6/28/12/10:20		6/28/12/1020

* The individual signing this agreement on behalf of client acknowledges that they have read and understand the terms of this agreement and that they have the authority to sign on behalf of client.